

marginal, but having become nearly obliterated by fusion with other tubercles successively formed outside them, and sometimes entirely lost in the resulting ridge. In one specimen a second series of very delicate ridges is clearly marked radiating outwards for a short distance from the base of the central cone and corresponding with the tertiary and quaternary costæ. The whole surface of the base of the corallum is covered with small rounded closely apposed granules. The large marginal tubercles of the base are from 4 to 5 mm. long, and about 4 mm. broad at their origin from the base. Superiorly they are joined by slightly elevated rounded ridges, the continuations into them of the primary and secondary costæ. The majority of the tubercles are tapering but some are obtuse. They terminate in three or four irregularly disposed spines. Two or even three marginal tubercles are sometimes fused together laterally into one mass.

From the region of origin of the marginal tubercles the wall of the calicle slopes outwards at an angle of about 60° with the plane of the base, its height above the plane being about 14 mm. The rounded ridges described as passing into the bases of the marginal tubercles reach upwards to the margin of the calicle. The external edges of the exsert primary and secondary septa are continued downwards along the middle of these costal ridges for about one-third the height of the wall of the calicle. The tertiary and quaternary costæ are present as much smaller ridges, separated by fine vertical striæ. The calicle is somewhat constricted at the region of attachment of the marginal spines, hence its lateral outline is not linear but curved slightly at a short distance from its inferior origin. The whole surface of the wall of the calicle is scattered over with small pointed granulations.

The calicle, which is circular in outline, is shallow. The arrangement of the septa is irregular in the two smaller specimens, which are of the size of the one described by Pourtalès: there are six systems and four cycles. In the other three larger specimens, in several of the large interseptal spaces, included between the primary and secondary septa, two septa are developed in addition to the usual three. In the largest specimen these additional septa are present in five of the twelve larger interseptal spaces, in another in six. In one intermediate in size between the two last mentioned, the primary and secondary septa combined are thirteen in number, and one of the larger interseptal spaces only has additional septa developed in it. There is thus a tendency in this species to develop a fifth cycle of septa. A large number of the *Trochocyathi armés* of Milne-Edwards and Haime are provided with five cycles of septa. The septa are complete with the exception of those of the fourth and partial fifth cycle. The primary and secondary septa are very prominently exsert, projecting 4 mm. vertically above the margin of the wall of the calicle. Their edges are rounded, and they slope gradually downwards to the spot where the pali take origin. The tertiary and quaternary septa are also exsert, but in a much less degree. The tertiary septa occasionally coalesce with the primary or secondary. The primary, secondary, and tertiary septa are provided with pali which form three circlets. The pali